



Trim Static Correction

NZ 3D Processing

02 June 2021

cgg.com



INSTITUTE FOR GEOPHYSICS



Passion for Geoscience

1. Convert to CGG Internal Format
2. Nav merge / trace edit
3. Low Cut Filter
4. Time Variant Scaling (TVS) & Resample to 4ms
5. Swell Noise Attenuation (SNA)
6. Debubble
7. Linear Noise Attenuation (LNA)
8. Tidal Statics Correction
9. Water Column Statics Correction
10. Shot & Channel Scaling
11. Receiver Motion Correction (RMC)
12. Joint Deghost & Designature
13. Residual Bubble Removal
14. Source Sensor Datum Correction
15. Shallow Water Demultiple
16. Surface Related Multiple Elimination (3D SRME)
17. Simultaneous Subtraction of MWD & SRME
18. Residual Linear Noise Attenuation (residual LNA)
19. Trace Regularization & Interpolation
20. Velocity Analysis
21. Radon Demultiple
22. Footprint Removal
23. Diffracted Multiple Removal
24. Common Offset Denoise
25. Q Analysis and Compensation
26. Final TTI Kirchhoff Migration
27. Convert from Depth to Time Domain
28. High Density Automatically Velocity Analysis
29. Radon Demultiple
30. Trim Static Correction

- **Objective:**

To further flatten cdp gathers.

- **Procedure:**

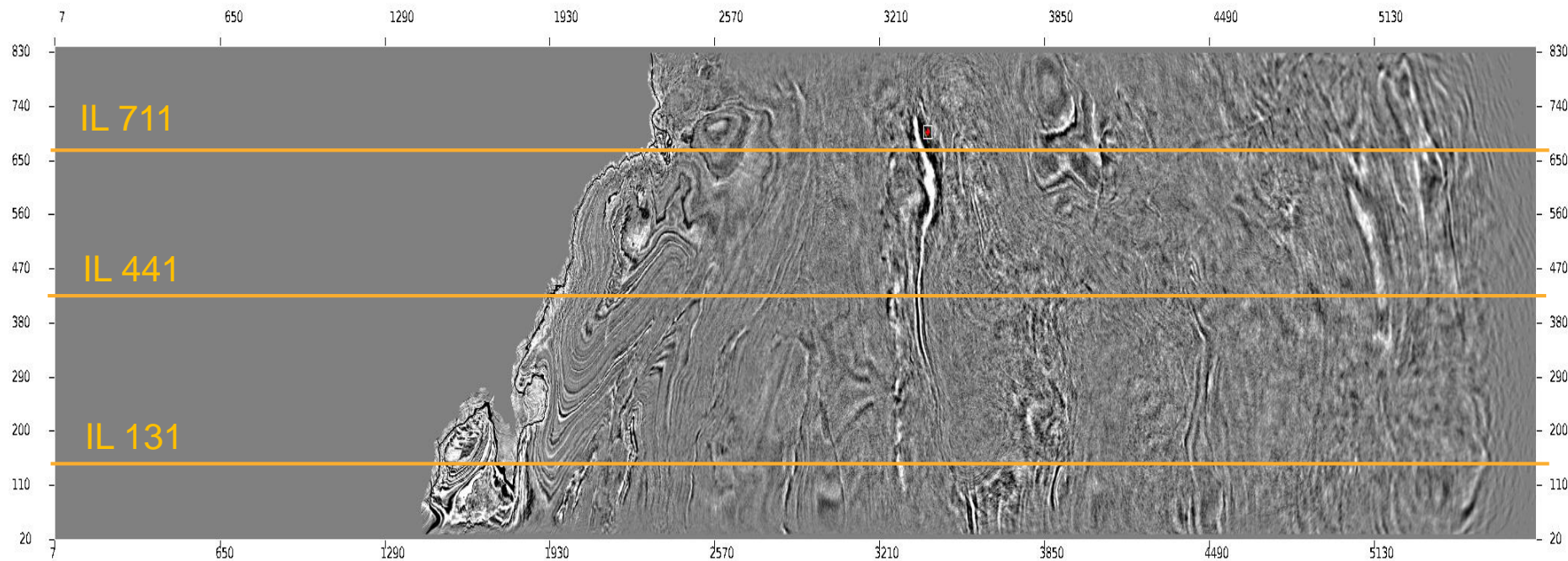
- Input gathers are CDP gathers after Radon de-multiple.
- Use near angle (8-12 degree angle) events as a reference to compute the static shift value.
- 3D Smoothing on trim statics shift.
- Apply trim statics shift on the gathers.

- **Display:**

Depth stack, time CDP gathers.

- **Observation & Recommendation:**

CDP gathers are flatter, primaries are more focused on stack. It's recommended to apply for production.



Subline



Crossline

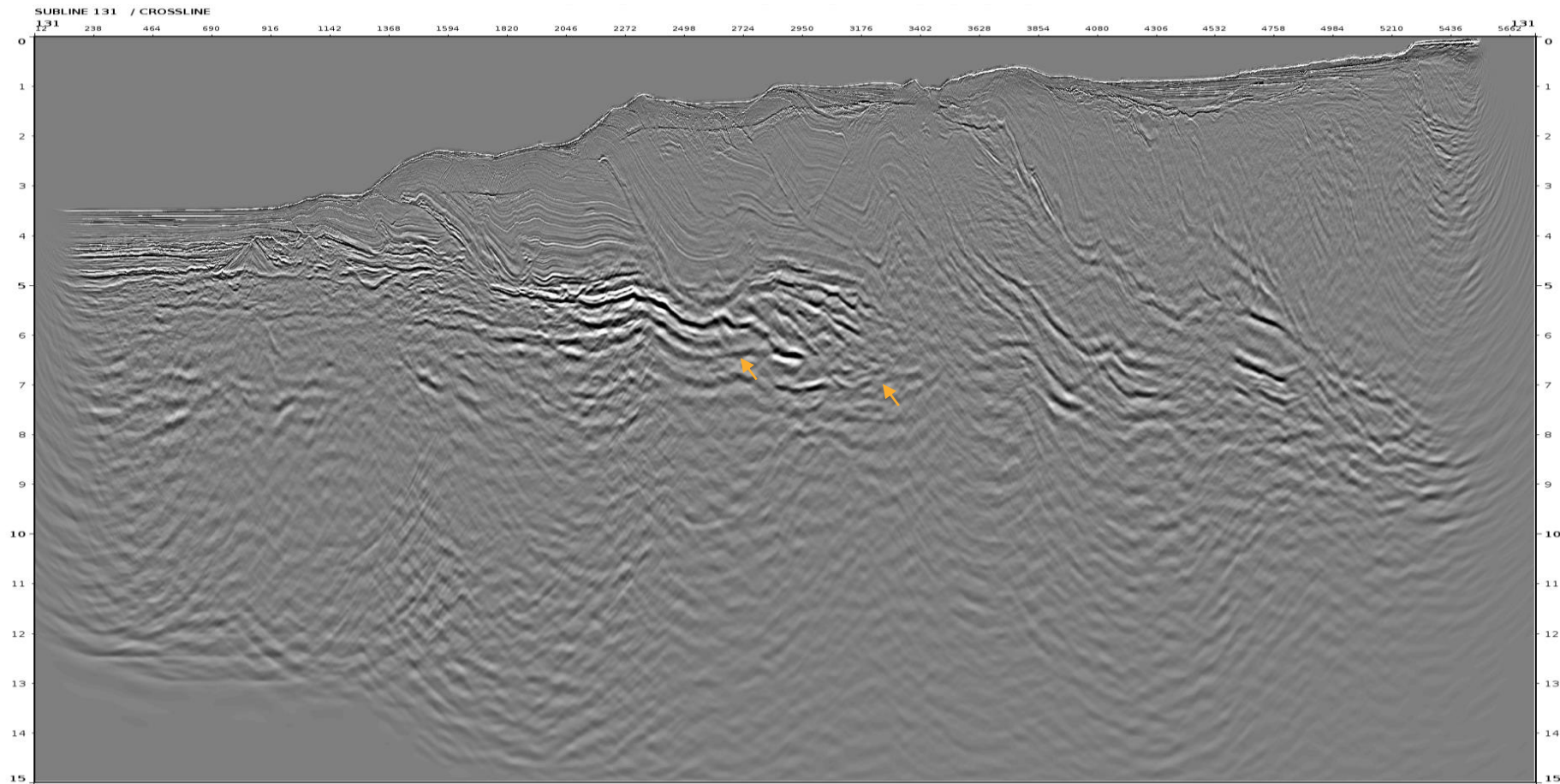
IL 131

- Full depth stack (0-35deg)
- Ultra Far depth stack (35-45deg)
- Time CDP gathers (0-50deg)



Depth Stack (0-35deg) before Trim Static Correction

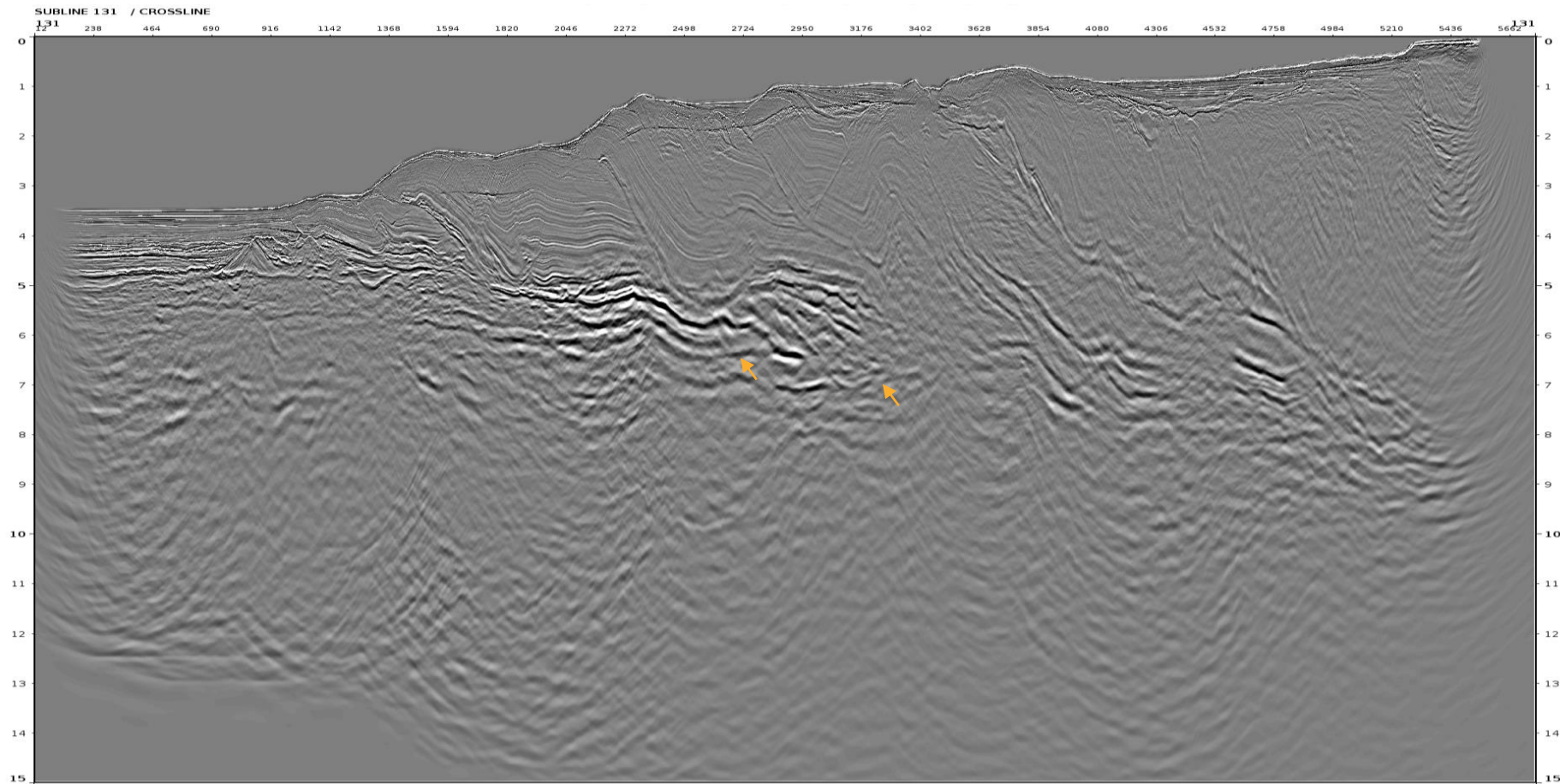
6





Depth Stack (0-35deg) **after** Trim Static Correction

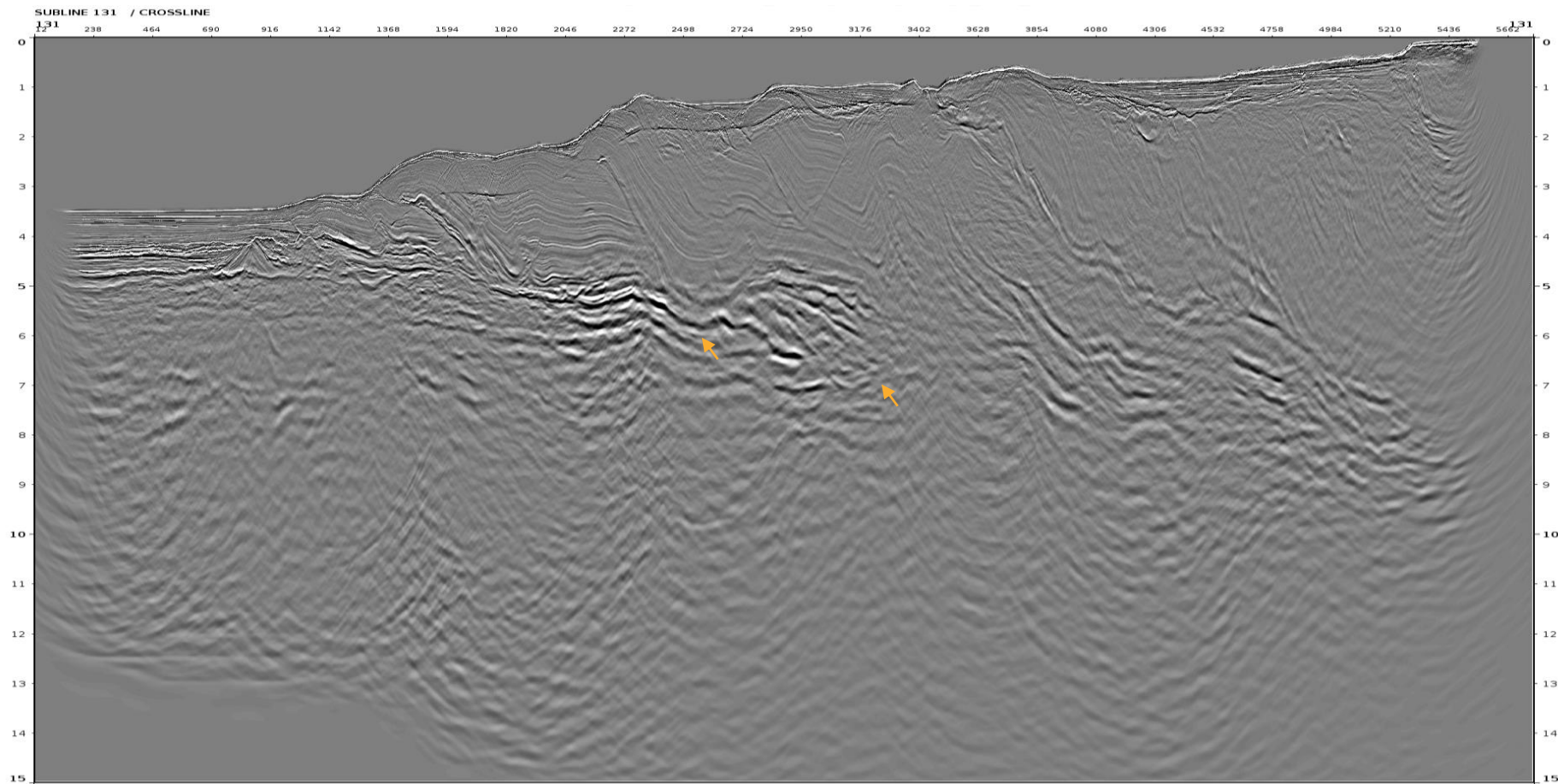
7





Ultra Far Depth Stack (35-45deg) before Trim Static Correction

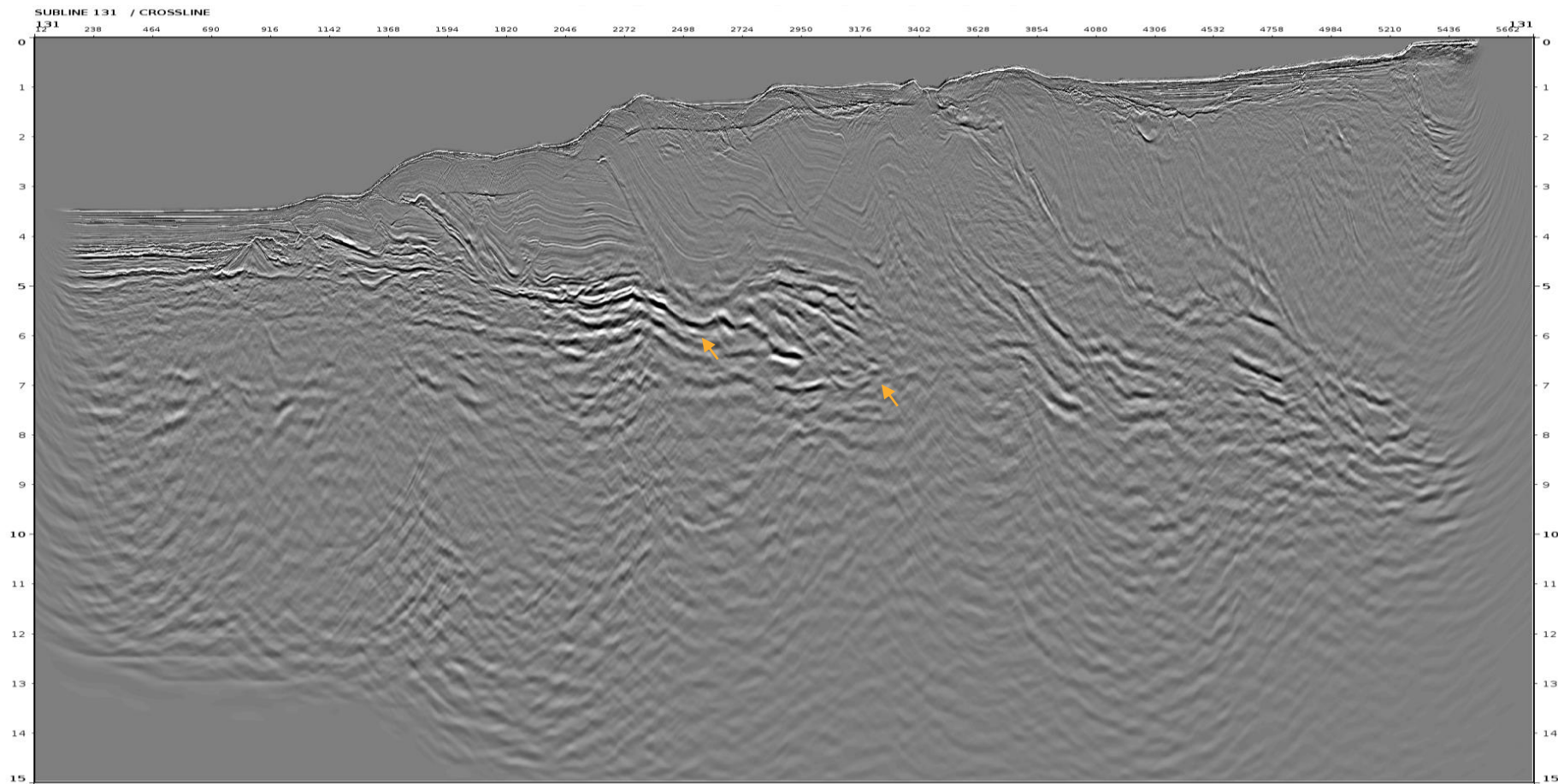
8





Ultra Far Depth Stack (35-45deg) **after** Trim Static Correction

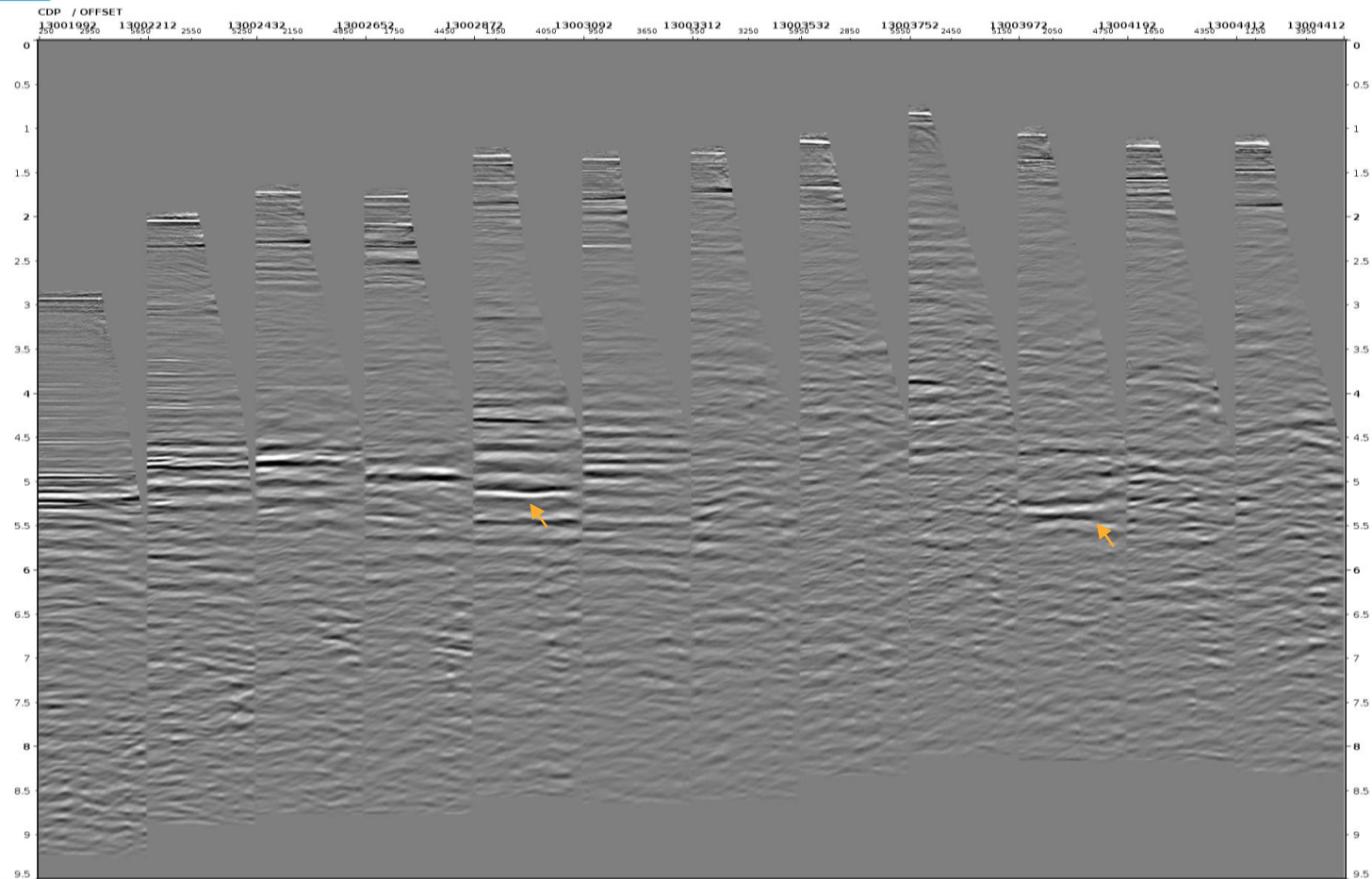
9





Selected Time CDP Gathers before Trim Static Correction

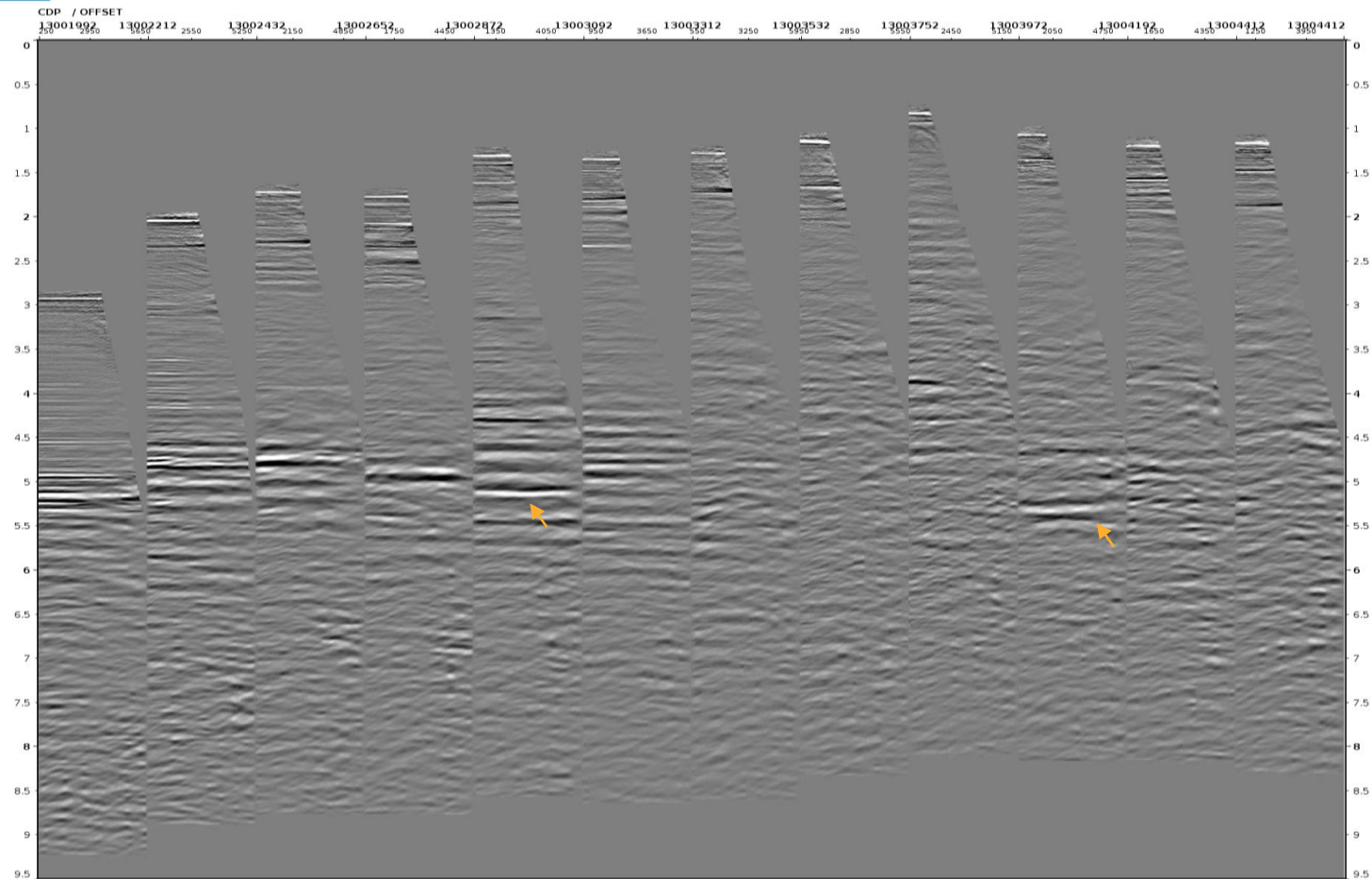
10





Selected Time CDP Gathers after Trim Static Correction

11



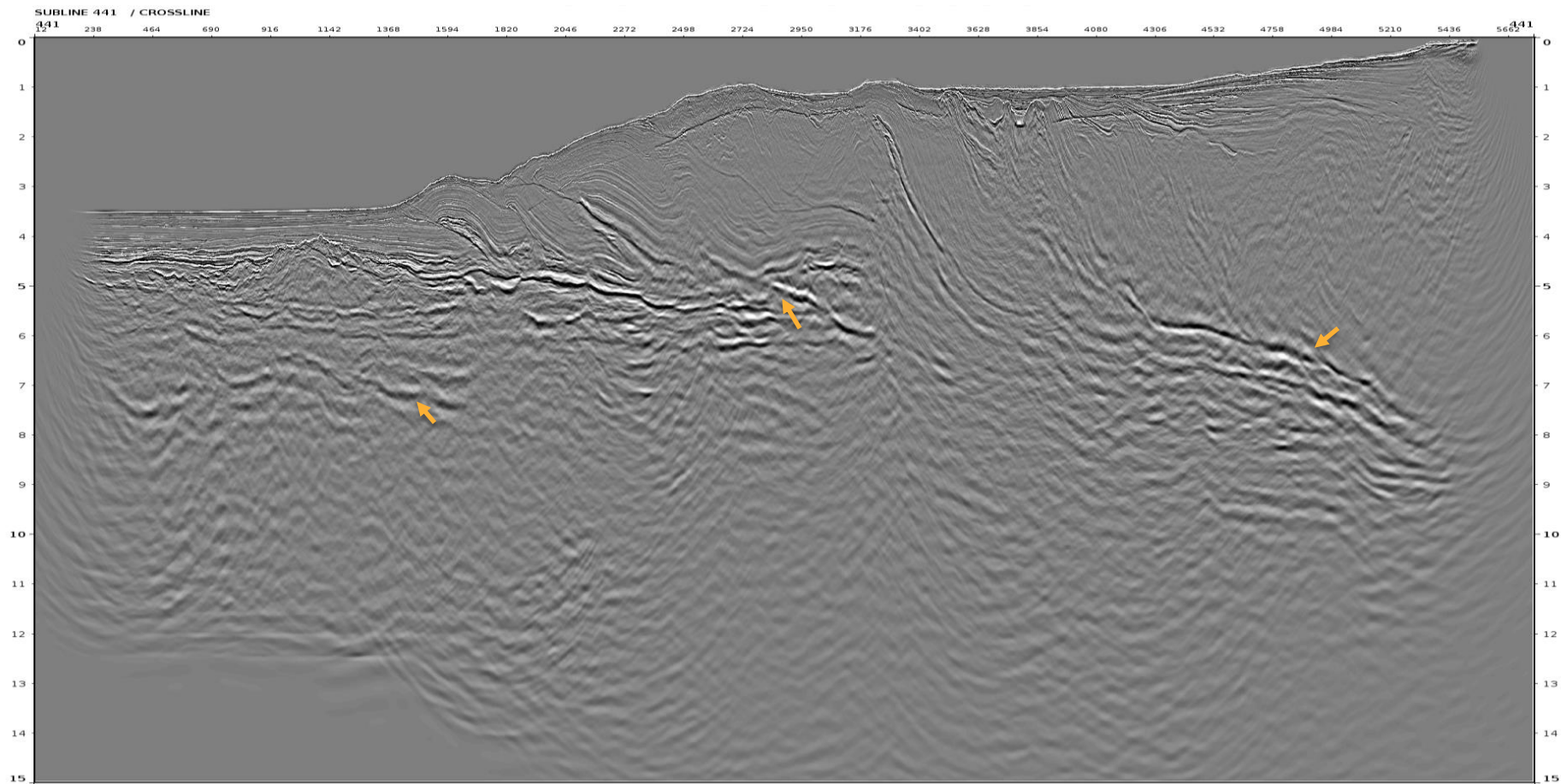
IL 441

- Full depth stack (0-35deg)
- Ultra Far depth stack (35-45deg)
- Time CDP gathers (0-50deg)



Depth Stack (0-35deg) before Trim Static Correction

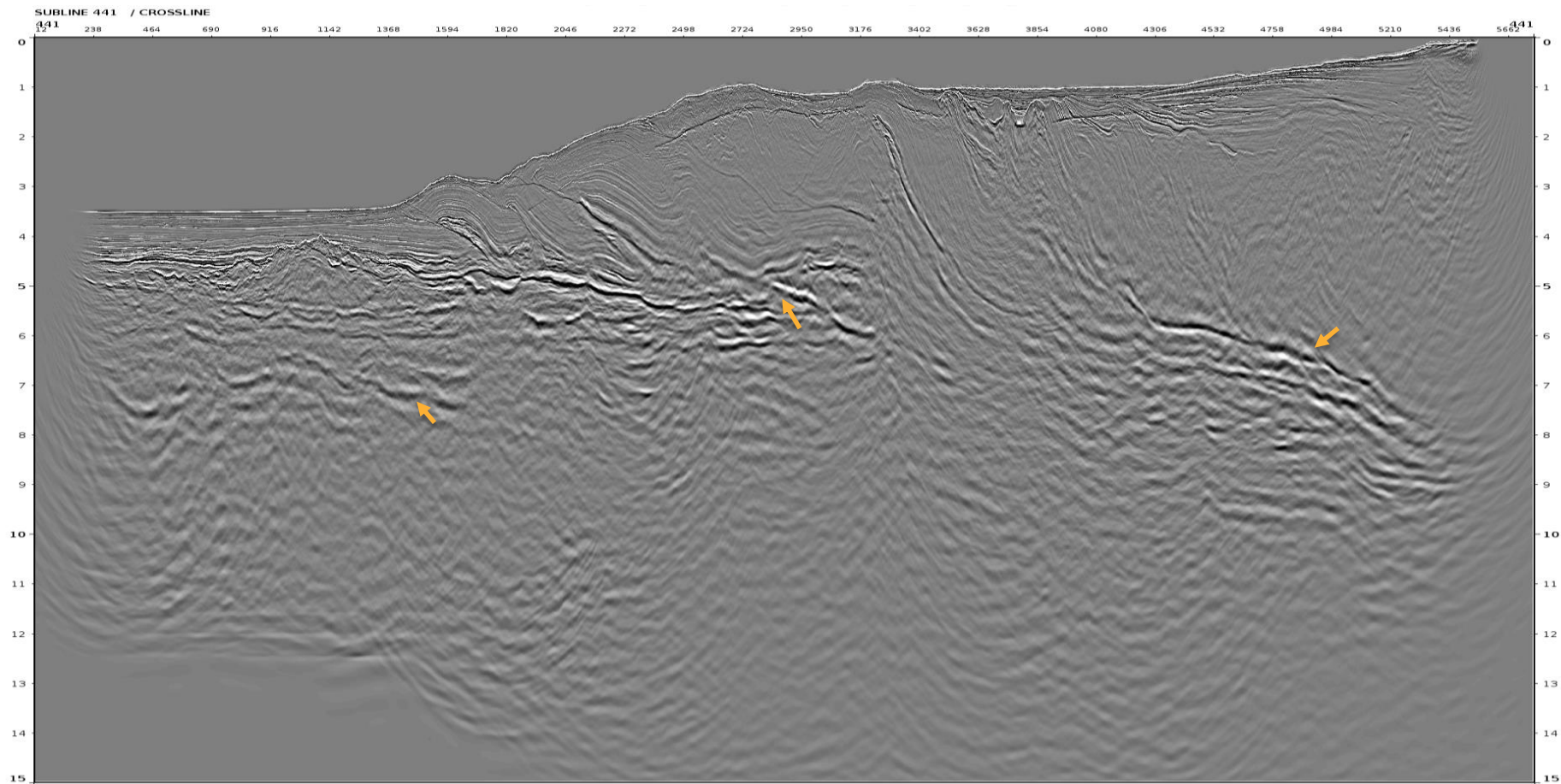
13





Depth Stack (0-35deg) after Trim Static Correction

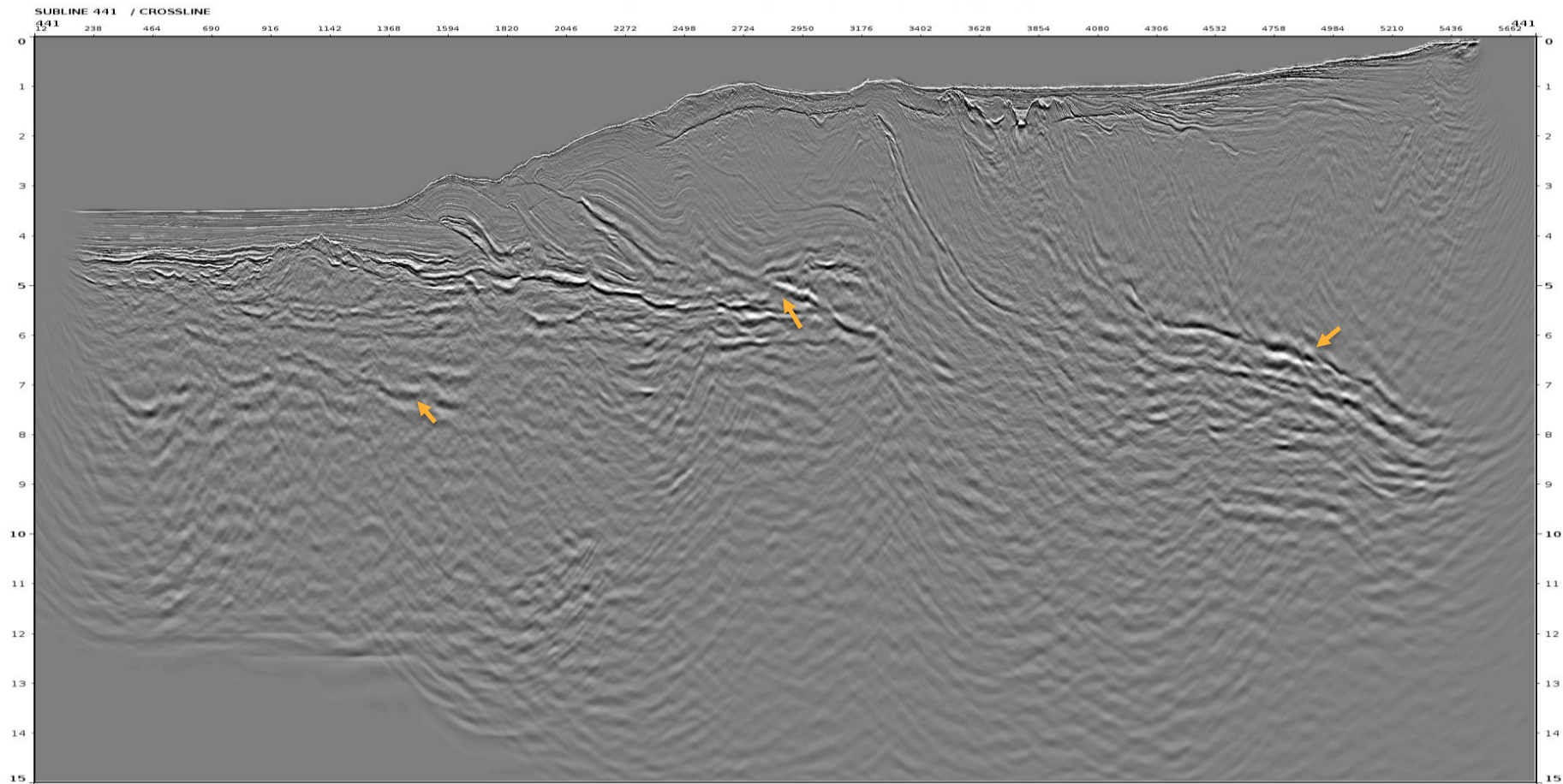
14





Ultra Far Depth Stack (35-45deg) before Trim Static Correction

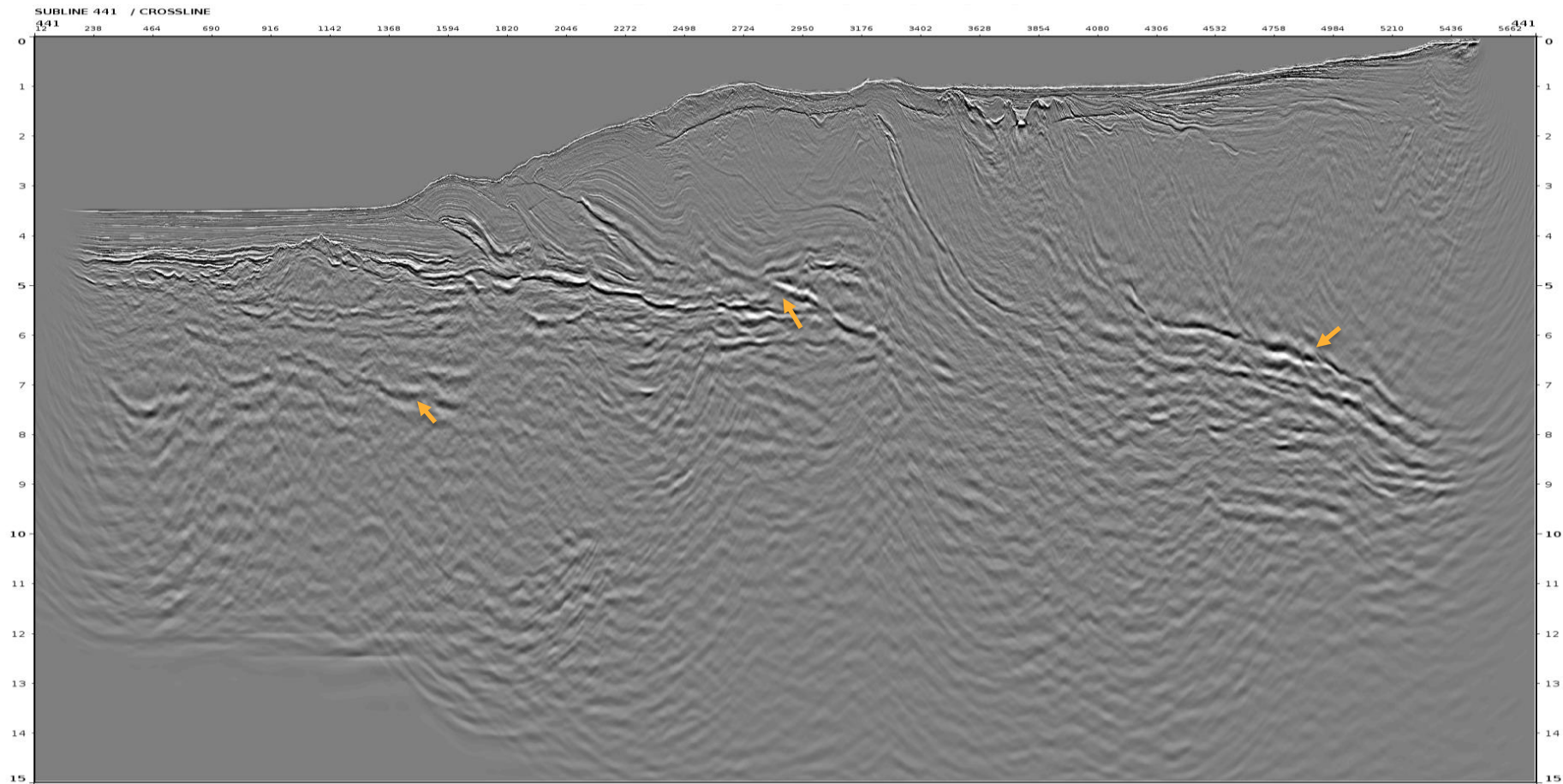
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Ultra Far Depth Stack (35-45deg) **after** Trim Static Correction

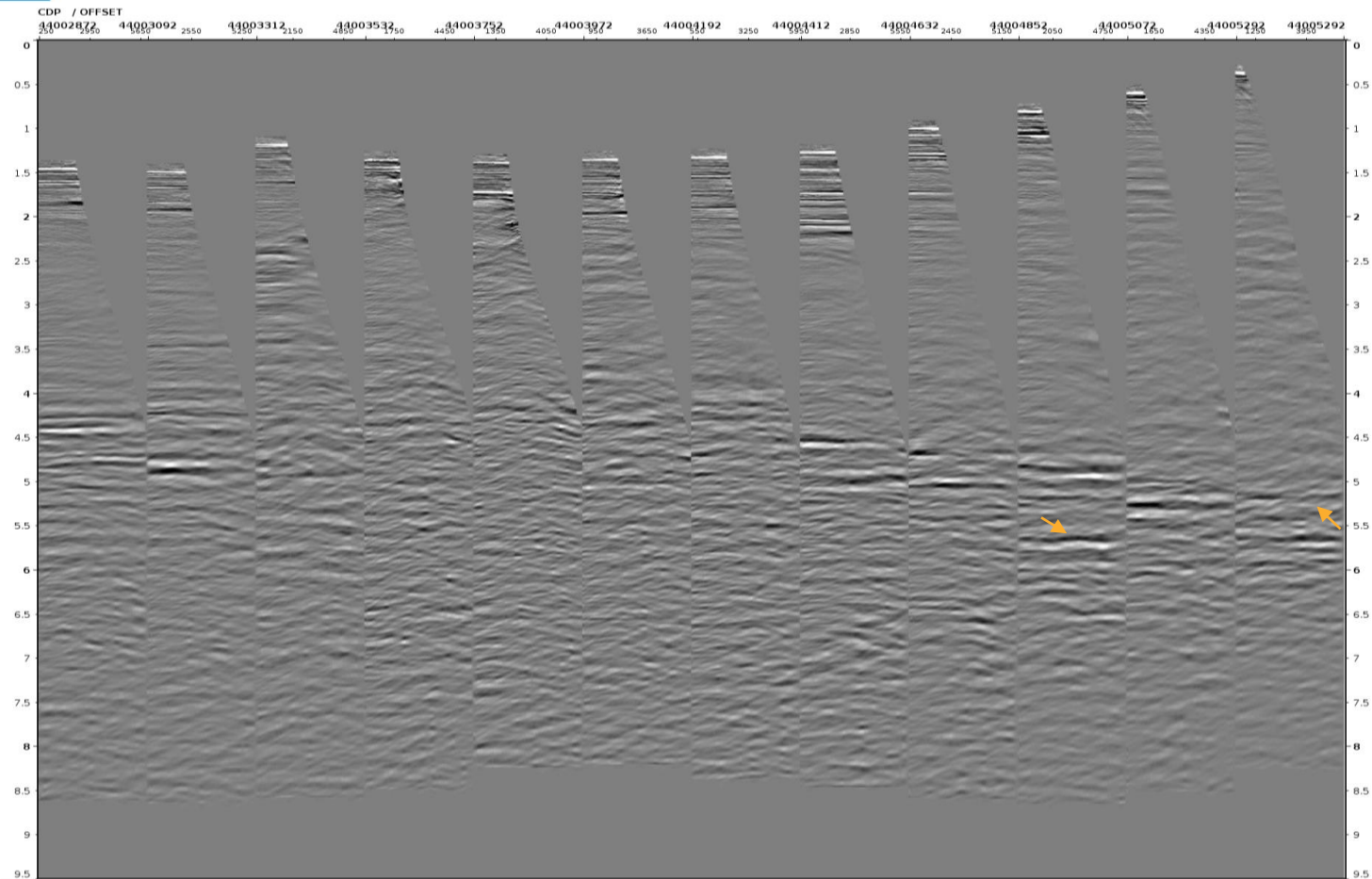
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Selected Time CDP Gathers before Trim Static Correction

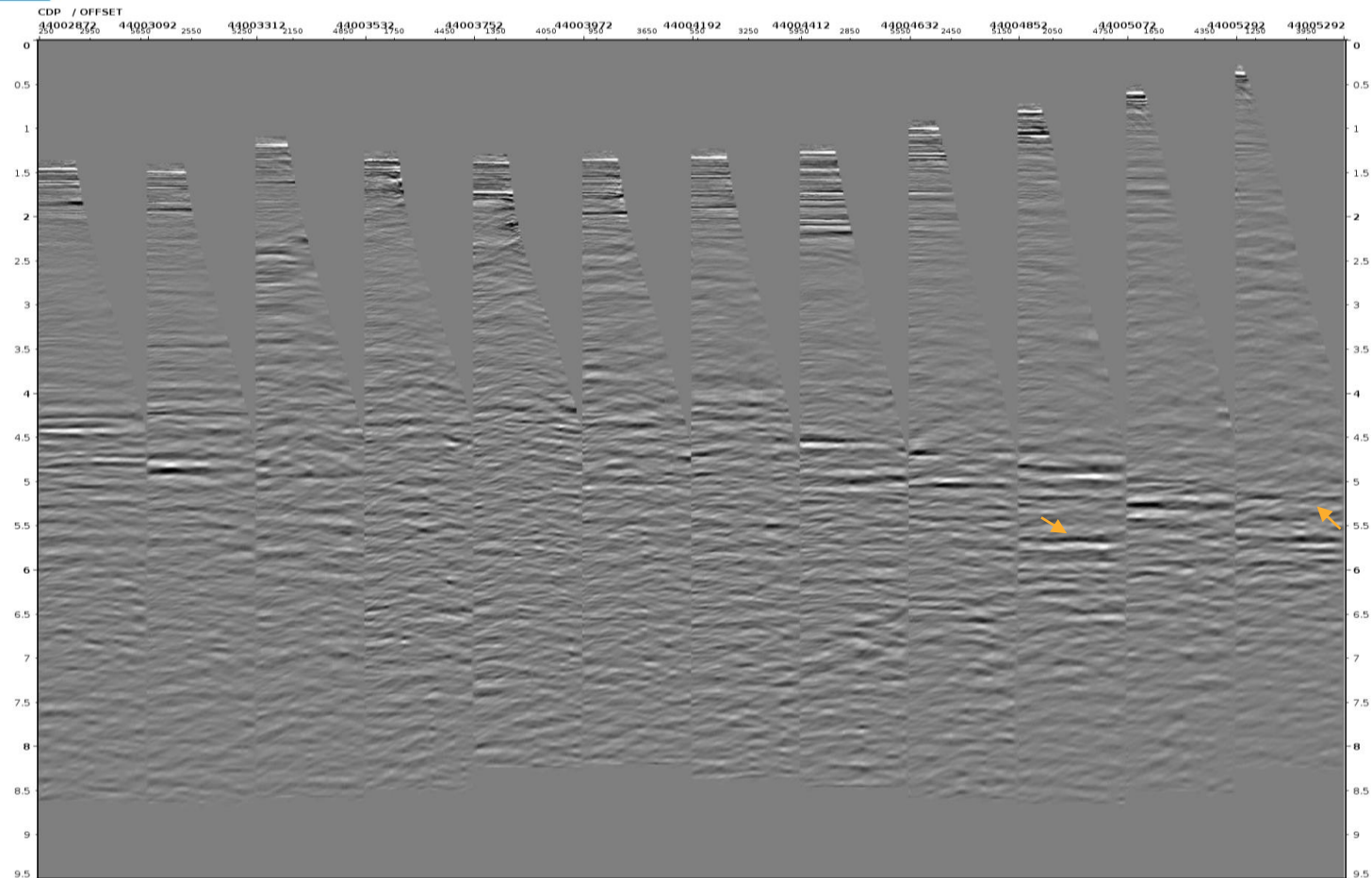
17





Selected Time CDP Gathers after Trim Static Correction

18



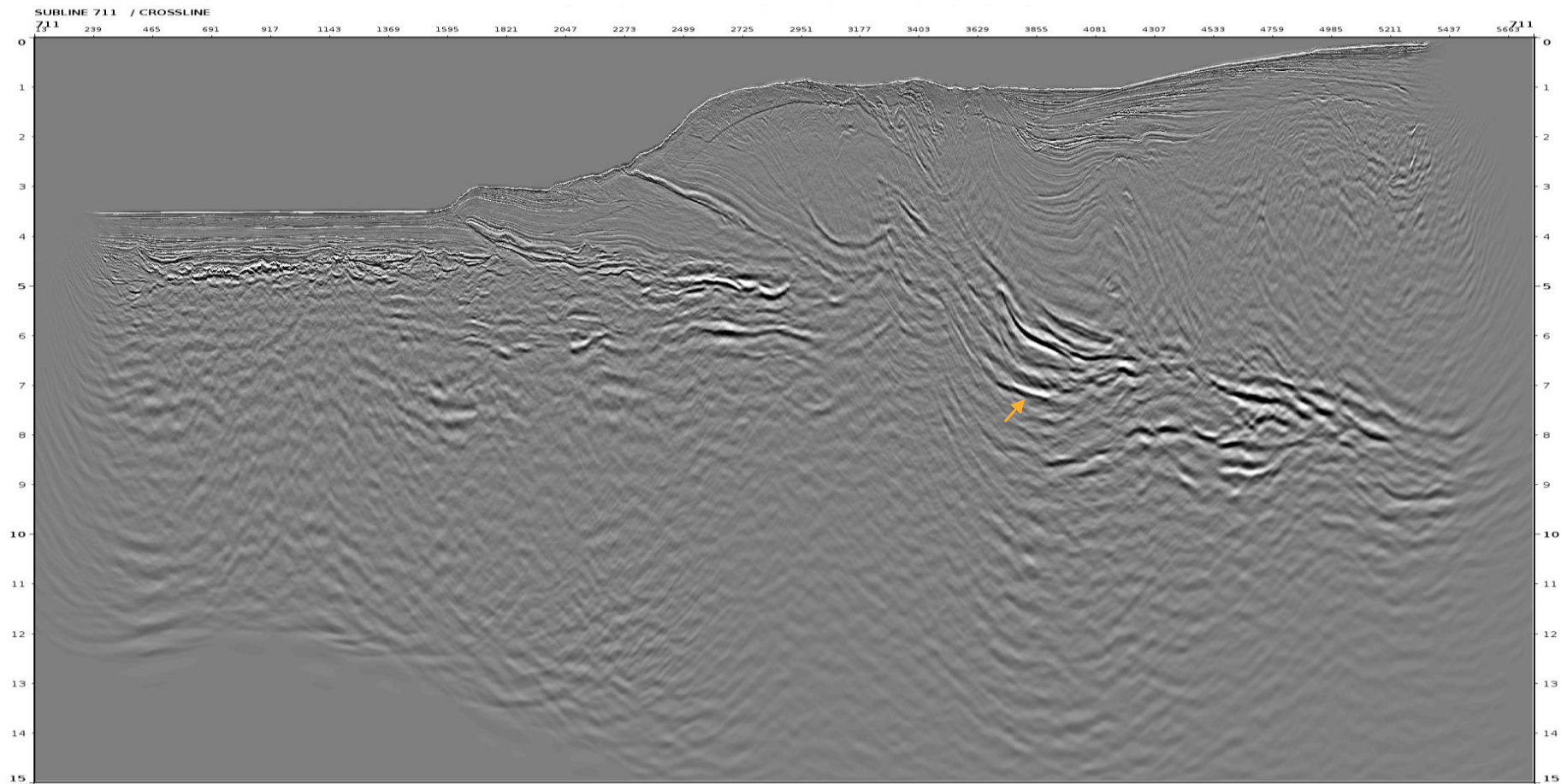
IL 711

- Full depth stack (0-35deg)
- Ultra Far depth stack (35-45deg)
- Time CDP gathers (0-50deg)



Depth Stack (0-35deg) before Trim Static Correction

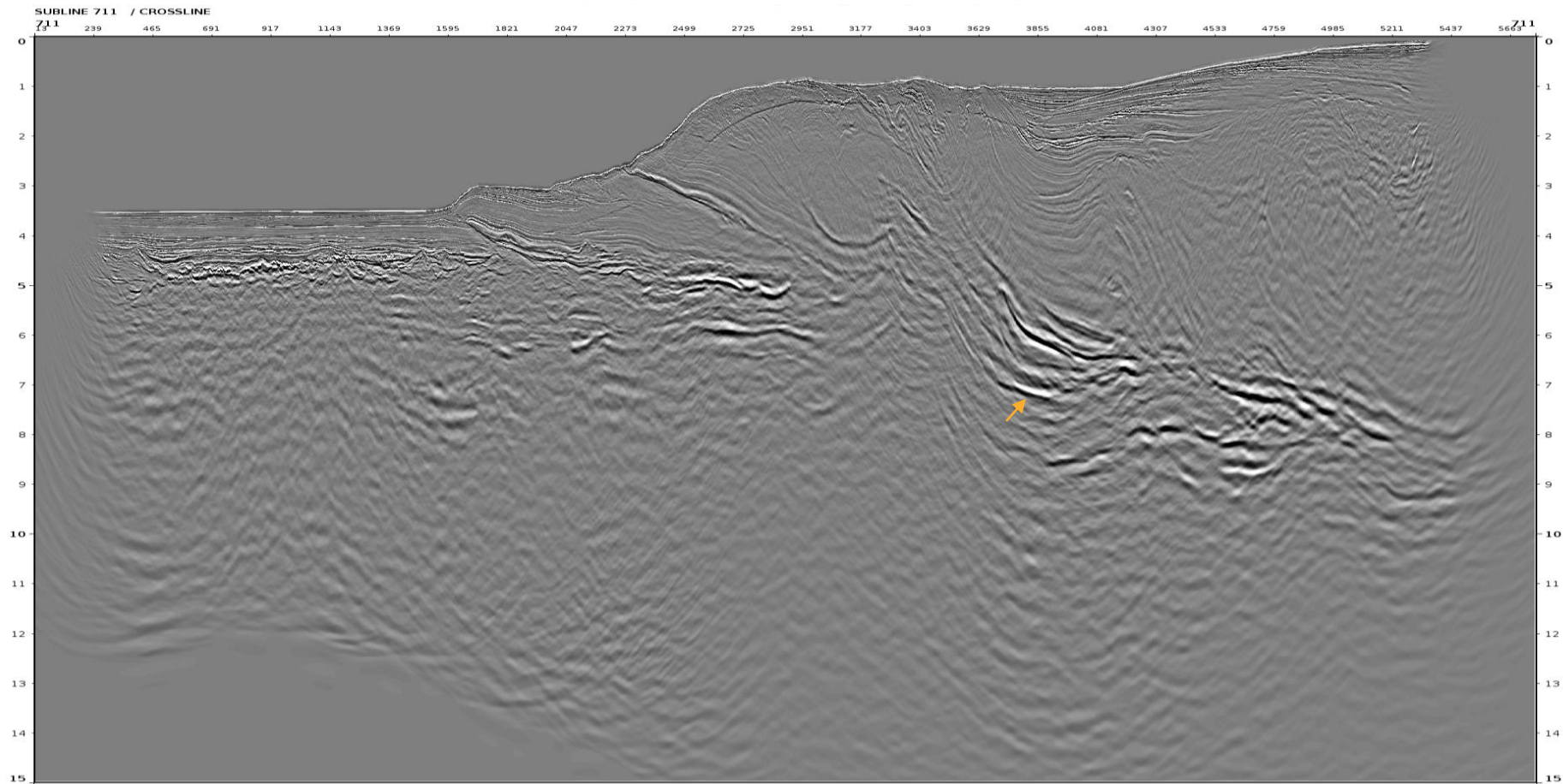
20





Depth Stack (0-35deg) **after** Trim Static Correction

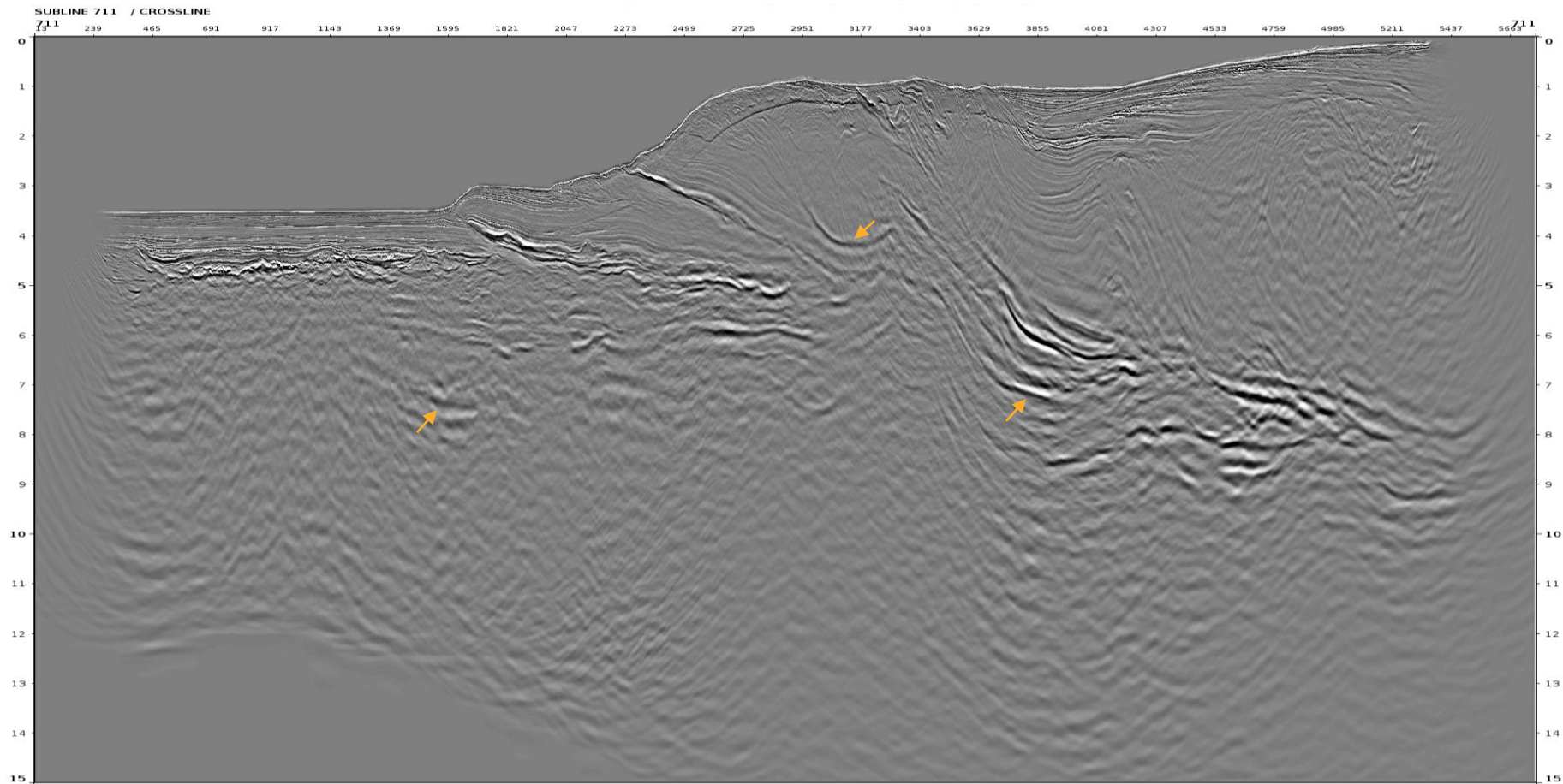
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Ultra Far Depth Stack (35-45deg) before Trim Static Correction

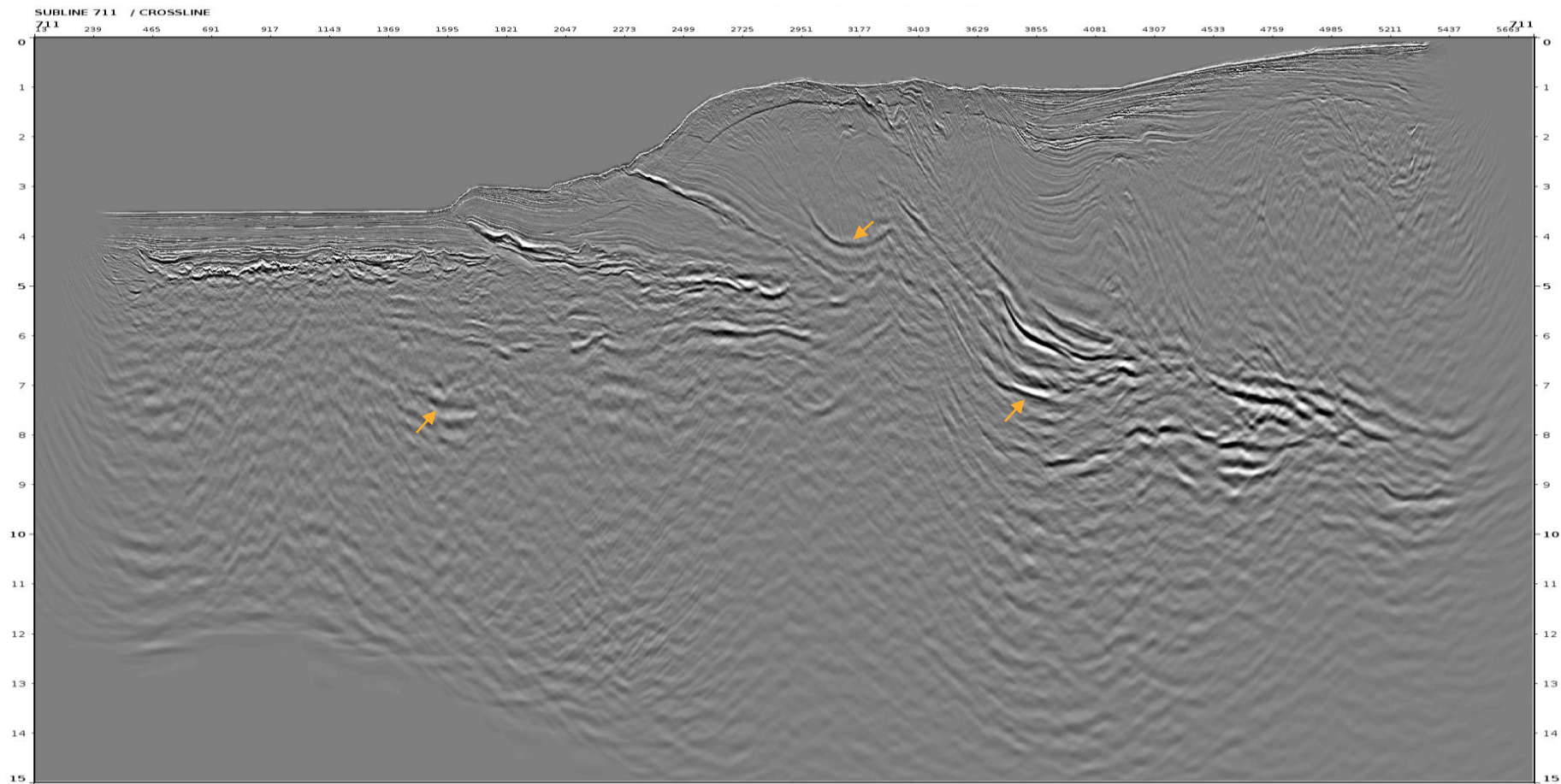
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Ultra Far Depth Stack (35-45deg) **after** Trim Static Correction

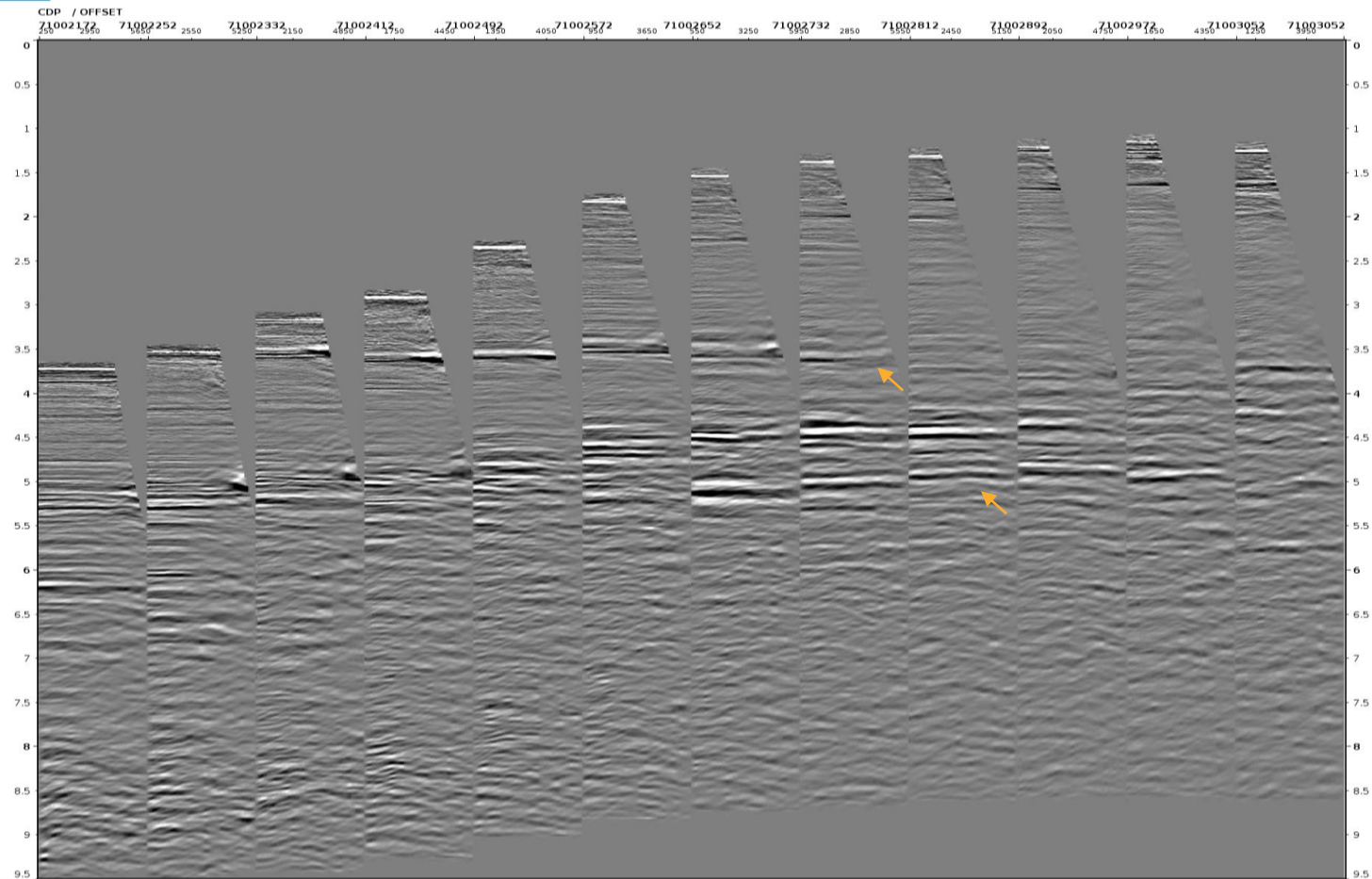
23





Selected Time CDP Gathers before Trim Static Correction

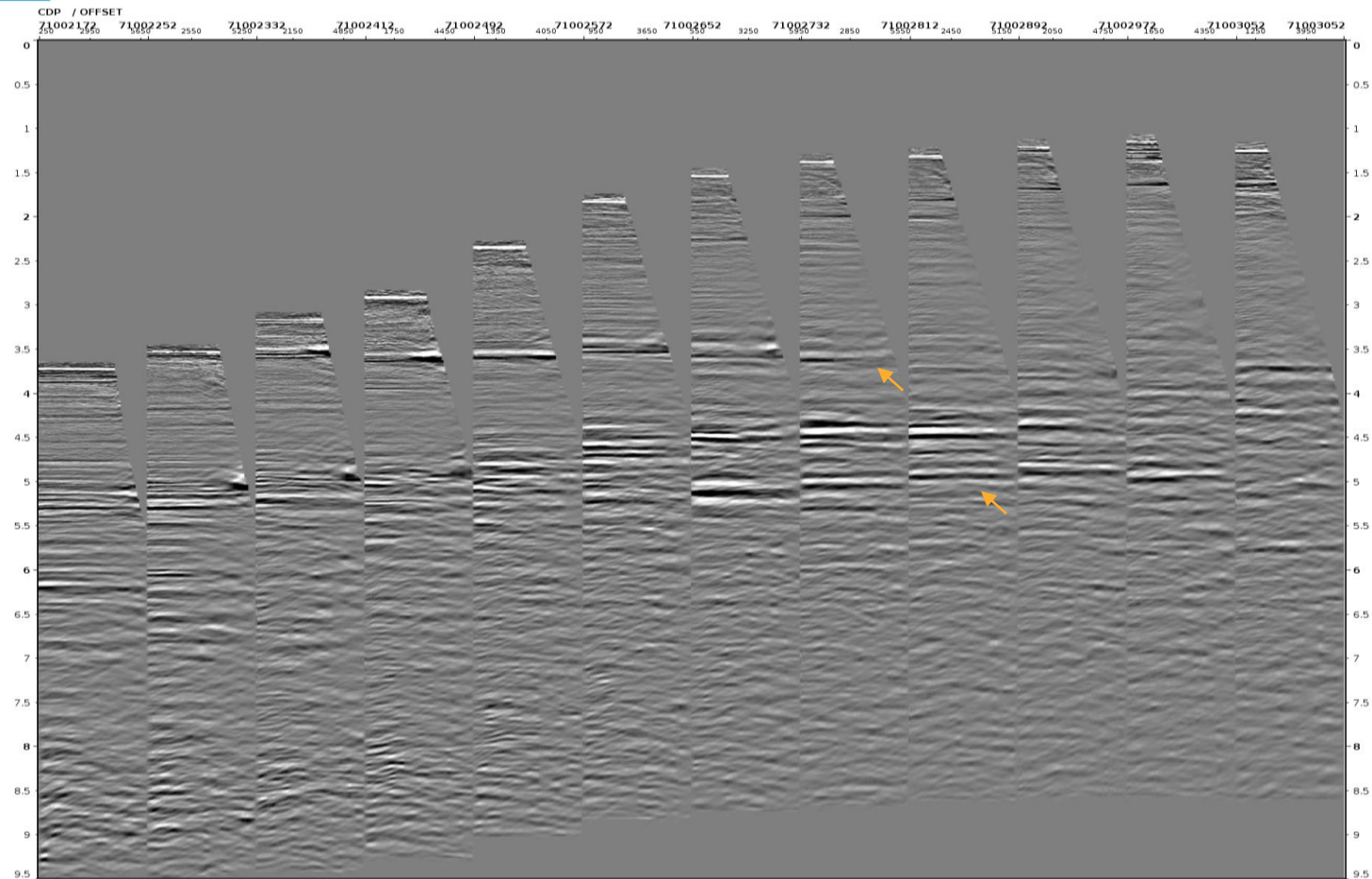
24





Selected Time CDP Gathers after Trim Static Correction

25



- CDP gathers are more flatter after trim static correction, as a result, primaries are more focused.
- We recommend to apply for production.